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20. . . . was supported in a study of 362 Navy enlisted aircraft maintenance personnel, where the salience of psychological influence was determined by assessing the fit between personal characteristics of a subordinate (e.g., fear of failure) and the degree of overload in the work environment. Results are discussed in terms of perceptions of a leader and research on relationships between these perceptions and affect/behavior.

Perceptions of Psychological Influence: Bridging the Gap Between Situational
Antecedents and Behavioral and Affective Outcomes

The objective of the present study is to effect a coupling between (a) selective attention as it relates to subordinates' perceptions of their influence on decisions made by their supervisors (Vroom, 1960), and (b) relationships between such subordinates' influence perceptions and their behavior/affect. The term "psychological influence" is employed to refer to subordinates' influence perceptions (James, Gent, Hater, & Coray, 1979). The general hypothesis that guided the research is that the person variable-environmental context moderators which affect psychological influence (perceptions) in the early stages of cognitive information processing (i.e., predispose individuals to be selectively attentive to influence opportunities) will be consistent with the person-context moderators on which psychological influence-behavior/affect relationships are dependent in the later stages of cognitive information processing. In effect, the question is whether psychological influence is important to a given type of individual in a given type of situation. If psychological influence is important to the individual, then he/she should selectively attend to behaviors on the part of the supervisor that reflect influence opportunities. Furthermore, it seems reasonable to expect that if the need (or desire) for influence is of sufficient importance to effect selective attention, then the resulting psychological influence perceptions would be employed to make decisions regarding behavior and to provide information input for affective reactions.

Unfortunately, it was not possible to study cognitive processes directly (Nisbett & Wilson, 1977), nor was it possible to make direct causal inferences in the present study. Nevertheless, an investigation of relationships among

supervisors' behaviors and subordinates' perceptions, and between subordinates' perceptions and their performance and affective reactions, provides at least a partial test of the "consistency hypothesis." Moreover, if the consistency hypothesis is supported, then it would form a basis for bridging the gap between studies which have treated influence perceptions as dependent variables (Bass, Valenzi, Farrow, & Solomon, 1975; Dansereau, Graen, & Haga, 1975; Gilmore, Beehr, & Richter, 1979; Graen, 1976; Graen & Schiemann, 1978; James et al., 1979) and studies in which influence perceptions have been treated as independent variables (Driscoll, 1978; House & Mitchell, 1974; Kenis, 1978; Ruble, 1976; Runyon, 1973; Schuler, 1976; Vroom, 1959, 1960). An important product of such a bridge would be the opportunity to trace the relationships from supervisor behaviors to subordinate perceptions to subordinate performance/affect for a given type of subordinate within a given type of work environment.

Research Plan

Identification of variables that predispose subordinates to be selectively attentive to influence opportunities proceeded by examining the environmental contexts to be studied for salient environmental presses (Bronfenbrenner, 1977; James et al., 1979). The study sample consisted of enlisted aircraft maintenance personnel in Navy Air Training Commands. Interviews with representatives of the commands helped to identify an important environmental press, namely the extent to which the maintenance personnel were "overloaded" by such things as extended work hours, undermanning, and pressures for high productivity. Overload conditions were linked to the needs for increased maintenance of aircraft brought about by expanded training programs to replace pilots leaving the military to join an expanding civilian air industry.

Proceeding from the standpoint that overload comprised a major contextual

moderator, the next step in the process was to identify person variables that interact with overload and predispose subordinates to value influence and thus to be selectively attentive to influence opportunities. The interviews described above, together with reviews of the overload, personality, and influence literatures, and some extrapolations, led to the selection of four person variables that presumably served this purpose.¹ These variables were achievement motivation, self-esteem, need for certainty, and impulsiveness. Of additional importance is that these four person variables are conceptually related. To illustrate, high achievement motivation connotes a stronger motivation to succeed than to avoid failure on moderately demanding tasks (cf. Revelle & Michaels, 1976), which implies a relatively high level of self-confidence and prior successes (i.e., high self-esteem). Furthermore, high achievement motivators have been found to prefer clear and organized paths to goals in order to enhance accomplishment (i.e., high need for certainty) and, therefore, should not act impulsively (cf. Secord & Bachman, 1974). Based on these presumed relationships, a person typology was developed. Type I individuals were characterized by comparatively high levels of achievement motivation, self-esteem, and need for certainty, and low levels of impulsiveness. Type II individuals were described as having comparatively low levels of achievement motivation, self-esteem, and need for certainty, and high levels of impulsiveness.

High versus low overload was crossed with Type I versus Type II person types to provide four subgroups. Within each subgroup, hypotheses were developed regarding expected relationships between subordinates' perceptions of psychological influence and (a) supervisors' use of influence opportunities and control (for each subordinate), and (b) subordinates' job performance, satisfaction with the Navy, and anxiety. The former set of relationships

provided a basis for testing a selective attention hypothesis, while the latter relationships were employed to test the general consistency hypothesis. The expected relationships for each subgroup are as follows.

High Overload-Type I. High overload conditions connote high environmental press for achievement, which should stimulate Type I's to manifest high levels of achievement motivation, self-esteem, certainty, and low impulsiveness (as long as successful accomplishment of work objectives is not severely restricted). Moreover, psychological influence should be salient to these individuals because influence provides occasions to clarify paths to goals, to share in responsibilities for outcomes, to demonstrate competence, and to attempt to insure that courses of action are planned and carried out in an organized manner. Thus, it is hypothesized that Type I subordinates in high overload conditions will be selectively attentive to supervisor-initiated influence opportunities, as evidenced by a significant, positive correlation between supervisor influence opportunities and subordinates' psychological influence. On the other hand, supervisors' use of control should be related negatively to subordinates' psychological influence inasmuch as control detracts from opportunities to affect decisions and may be regarded as questioning competence. Finally, given the assumed salience of psychological influence in this subgroup, positive psychological influence-performance/satisfaction and negative psychological influence-anxiety relationships are anticipated.

High Overload-Type II. The motivation to avoid failure and the low self-confidence thought to characterize Type II subordinates should be manifested in the form of a threat of failure in high overload conditions. Threat of failure should in turn lead to defensive actions to protect self-esteem,

where defensive lack of effort is a strong possibility (cf. Jones, 1973). From a cognitive standpoint, it is suggested that defensive lack of effort is in part a function of "psychological withdrawal." Psychological withdrawal involves cognitive self-removal from threatening, frustrating, and anxiety-producing situations, and is reflected by apathy, especially toward evaluative events. In the present circumstances, psychological withdrawal was expected to include (a) apathy toward perceptions of psychological influence and performance, because failure is viewed as likely and self-evaluations of responsibility for failure are avoided; (b) apathy toward supervisors' use of influence opportunities and control because these behaviors are likely to reflect negative evaluations resulting from failure; and (c) a conscious effort to avoid having satisfaction and anxiety contingent on perceived events which reflect evaluations of failure. In short, psychological withdrawal implies that Type II subordinates in high overload conditions value neither performance nor psychological influence, and that no attempt will be made to form cognitive contingencies between evaluative environmental events (influence opportunities, control) and psychological influence, or between psychological influence and both performance and affect. Nonsignificant relationships are predicted, therefore, for all relationships with psychological influence.

Low Overload-Type I. Low overload suggests low environmental press for achievement, which may not stimulate Type I's to manifest high levels of achievement motivation, self-esteem, and so forth. Nevertheless, it is expected that Type I subordinates do value psychological influence and will be selectively attentive to influence opportunities because such opportunities are intrinsically interesting in their own right, and further provide a basis for increasing what may be low job challenge (House & Mitchell, 1974). Moreover, Type I's might value psychological influence and be attentive to influence opportunities

because influence allows them to ensure that actions are planned and organized. Thus, positive influence opportunity-psychological influence relationships are predicted. Negative control-psychological influence relationships are also predicted, for the same reasons discussed for Type I's in high overload conditions. Finally, assuming that psychological influence perceptions are salient to Type I's in low overload conditions, it is anticipated that the perceptions will be related positively to performance and satisfaction, and negatively to anxiety.

Low Overload-Type II. The low environmental press for achievement implied by low overload is expected to suggest to Type II subordinates that there is a low probability of failure and a high probability for successful performance. Consequently, if it is assumed that (a) motivation to succeed will overcome motivation to avoid failure, (b) Type II's will seek self-enhancement in situations with high probability of success (cf. Bandura, 1978; Jones, 1973), and (c) the motivation to succeed will dispel tendencies toward disorganization and impulsiveness, then it is possible to predict a "contingent" situation rather than the "psychological withdrawal" situation discussed for Type II's in high overload conditions.

In a contingent condition, Type II's should be concerned with performance because they regard successful performance as achievable. They should also value psychological influence and be attentive to supervisor behaviors because perceptions that one is even partially responsible for influencing successful outcomes is ego-reinforcing and self-enhancing (Bandura, 1977, 1978). However, it is expected that the Type II subordinates will be attentive primarily to supervisors' use of control, rather than influence opportunities, because (a) the operationalization of influence opportunities includes

provision of autonomy (i.e., encourages subordinate to act on own) and the setting of high objectives for the subordinate, and these supervisor behaviors could be threatening to Type II's, even in low overload conditions; and (b) the basic defensiveness of Type II's that evolves from fear of failure and protection of self-esteem might stimulate them to be sensitive primarily to decreases in negative feedback (i.e., decreases in control) rather than to increases in potentially threatening stimuli (i.e., increases in influence opportunities) (cf. Shrauger & Schoeneman, 1979). Consequently, it is predicted that Type II's in low overload conditions will be selectively attentive to supervisors' use of control in the construction of psychological influence perceptions, where the relationship should be negative. Finally, given the expected salience of influence perceptions and performance, it is hypothesized that psychological influence will be related positively to performance and satisfaction, and negatively to anxiety.

Analytic Objectives

The predicted relationships for all subgroups are presented in Table 1. The first two columns summarize the hypothesized relationships for selective attention, while the last two columns summarize the hypothesized psychological influence-performance/affect relationships. Empirical tests of these hypotheses were predicated on (a) assessments of whether the relationships conform to the predictions in each subgroup, and (b) determinations of whether significant differences in relationships exist among the subgroups. Empirical confirmation of the predictions would support the consistency hypothesis. That is, for any subgroup, a significant relationship in column one or column two would suggest selective attention, and should be followed by significant psychological influence-performance/affect relationships. In contrast, nonsignificant

relationships in both columns one and two would imply lack of attentiveness, and thus perceptions of psychological influence should not be related significantly to the performance/affect variables.

Insert Table 1 about here

Method

Sample

Samples of subordinates ($n=422$) and their immediate supervisors ($n=110$) were obtained for aircraft maintenance personnel from two Navy Air Training Commands located in the Southern portion of the United States. All subordinates and supervisors were from enlisted ranks. The types of jobs conducted by the subordinates varied across a fairly wide range of technologies, from the very routine (e.g., fueling aircraft) to the very complex (e.g., repairing sophisticated equipment). The mean age of subordinates was 22.12 years ($SD=3.41$); mean time in the Navy was 37.03 months ($SD=30.67$); mean education was equivalent to that of a high school graduate; mean paygrade was halfway between E-3 and E-4; and almost all subordinates were male. For supervisors, the mean age was 28.59 ($SD=5.01$); mean time in the Navy was 109.89 months ($SD=54.22$); mean education was again approximately that of a high school graduate; mean paygrade was halfway between E-5 and E-6; and all supervisors were male.

All enlisted personnel and their immediate supervisors were asked to participate voluntarily in the study. Questionnaires were administered by

the authors, with assistance from Navy personnel, during working hours. The percentage of participants from all personnel eligible to participate was 81% for both subordinates and supervisors. No meaningful differences were found between the two Navy Air Training Commands with respect to any of the variables collected.

Instruments

All data were collected by means of questionnaires from either subordinates or their supervisors. Unless specified otherwise, all items were measured on five-point Likert scales or Likert-type scales (e.g., 1=Practically never . . . 5=Almost always). The instruments are described below under the categories (a) moderator variables, (b) supervisor behaviors, (c) subordinate perceptions, and (d) subordinate performance/affect.

It is important to note that of the 422 subordinates who completed surveys, 370 could be matched with 107 supervisors. For the 370 matches, eight subordinates were missing scores on one or two of the variables employed in the analysis. Exclusion of these subordinates left a final analysis sample of 362 subordinates and 107 supervisors. Comparisons were made for results on the 422, 370, and 362 subordinate samples (e.g., means, standard deviations, internal consistencies, correlations), and no meaningful differences were obtained. In view of these comparisons, all statistics presented below that apply to subordinates were computed on the 362 sample (with a few exceptions).

Moderator variables. Overload for each workgroup was described by the supervisor, using a five item composite [coefficient alpha (α) = .72] . The items measured the extent to which (a) subordinates had to work extended hours, (b) an insufficient number of subordinates were available to accomplish

tasks, (c) management (above the supervisor) provided insufficient time to accomplish tasks, (d) management increased pressure for high productivity, and (e) management increased pressure for quality of output. The mean item score was 3.06 ($SD=.73$). A split at the mean resulted in the classification of 192 subordinates from 57 workgroups as working in high overload conditions, and 170 subordinates from 50 workgroups as working in low overload conditions.

With minor revisions, the items completed by subordinates to measure achievement motivation [13 items, $\alpha=.77$, mean item score (M)=3.80, $SD=.46$], self-esteem (12 items, $\alpha=.74$, $M=3.68$, $SD=.50$), and need for certainty (10 items, $\alpha=.73$, $M=3.65$, $SD=.49$) were the same as those described in James et al. (1979). (James et al. used the term rigidity rather than need for certainty, although it was noted that need for certainty was the focus of measurement.) Items for impulsiveness were based on the scale developed by Barratt (1959, 1965), and included items such as "I get extremely impatient if I am kept waiting by someone who is late", and "I usually think carefully before doing anything" (reversed) (13 items, $\alpha=.77$, $M=2.77$, $SD=.52$).

The mean intercorrelation among the four person variable moderator scales was .37 (based on absolute values and Fisher Z scores); this supported the conceptual relationships discussed previously. The scales were standardized and combined to provide an overall composite score. Subordinates with scores of zero or greater were classified as Type I's ($n=185$) and subordinates with scores below zero were classified as Type II's ($n=177$). The person typology was crossed with the overload classification to form four subgroups of subordinates. The sample sizes for the subgroups were 98 for high overload-Type I (HO-I), 94 for high overload-Type II (HO-II), 87 for low overload-Type I (LO-I), and 83 for low overload-Type II (LO-II).

Supervisor behaviors. Each supervisor described each of his subordinates

on three items designed to measure influence opportunities and five items designed to measure control. The three influence opportunity items were essentially the same as those used by James et al. (1979), and involved both direct and indirect indicators of the influence that a subordinate had on a supervisor. The items described the extent to which the supervisor liked to have the subordinate's opinions about work-related matters, encouraged the subordinate to think and act on his own, and set high performance goals for the subordinate. The mean intercorrelation among the items was .37, and the items were combined to form one composite ($M=3.64$, $SD=.73$).

The five control items developed for this study were designed to measure closeness of supervision (two items) and use of disciplinary sanctions (three items). The items described the extent to which the supervisor (1) checked up on the subordinate to make sure work was done correctly, (2) watched the subordinate to make sure he did not slack off, (3) requested the subordinate to redo unsatisfactory work, (4) orally reprimanded the subordinate, and (5) placed the subordinate on report. The mean intercorrelation among the items was .39. Unlike items in the other composites in this study, the standard deviations of the control items were not similar. Thus, the items were standardized before summation and averaging. However, unstandardized data indicated moderate use of closeness of supervision and low to moderate use of disciplinary sanctions.

Subordinate perceptions. Four of the six items employed to measure subordinates' perceptions of psychological influence were the same as those employed by James et al. (1979); these items were developed originally by Vroom (1960) to measure "psychological participation." An example was "I have very little say or influence on what goes on in my job" (reversed). Two additional items were added to the scale for this study. These items des-

cribed the extent to which the supervisor changed the subordinate's duties without first talking it over with the subordinate (reversed), and rejected suggestions the subordinate had about his/her job (reversed). A composite based on the six items ($\alpha=.82$) had an item mean of 3.15 ($SD=.88$).

Subordinate performance/affect. Subordinate performance was based on a composite of ratings by the supervisor for efficiency, quality of work, and ability to work under pressure. A modified version of the mixed standard scale procedure (Blanz & Ghiselli, 1972) was employed to obtain the ratings. For each of the three rating scales, supervisors rated each subordinate on two items (each with the three-point scales and random order of presentation described by Blanz & Ghiselli), representing high and low performance. The correlations between the two items representing each rating scale were moderate, and the average correlation among the three rating scales, each based on a composite of two items, was .49.

Satisfaction with the Navy was based on a composite of six items ($\alpha=.80$, $M=2.62$, $SD=.81$) selected from a prior study on Navy enlisted personnel (Jones, James, Bruni, & Sells, 1977) and items designed to measure extrinsic satisfaction from the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England, & Lofquist, 1967). The items included degree of satisfaction (1=Strongly dissatisfied . . . 5=Strongly satisfied) with the way Navy policies are put into practice, pay for the amount of work completed, working conditions, and chances for advancement. Anxiety was based on five items from the state anxiety scale (Spielberger, Gorsuch, & Lushene, 1968 -- $\alpha=.83$, $M=2.49$, $SD=.85$).

Analytic Procedure for Subgroup Comparisons

A key component in the analysis involved comparisons of relationships

among the four subgroups (see Table 1). The comparisons were conducted using tests of "parallelism of regressions", which provided an opportunity to compare regressions of a dependent variable on an independent variable among all four subgroups in one overall test (Timm, 1975, pp. 331-347; see also Finn, 1974, pp. 337-338; Rao, 1965, pp. 237-240; Williams, 1959, chapter 8). The question addressed in a test of parallelism is whether unstandardized regression weights (b-weights), determined by separate regressions in each subgroup, differ significantly among the subgroups. The null hypothesis is $H_0 : \underline{\Gamma}_1 = \underline{\Gamma}_2 = \underline{\Gamma}_k = \dots = \underline{\Gamma}_K$, where each $\underline{\Gamma}_k$ represents a column vector of (subpopulation) b-weight(s) resulting from a regression of one dependent variable on one or more independent variables in subpopulation k. (For one independent variable, the $\underline{\Gamma}_k$ are scalars).

Using sample estimates of subpopulation parameters, the logic of the parallelism test is that if H_0 cannot be rejected, then a common set of b-weights can be employed (for a particular dependent variable) in all K subgroups. Rejection of H_0 , however, suggests that a common set of weights cannot be employed, which implies directly that the b-weights, or relationships, differ significantly among the subgroups. The significance test is predicated on determining whether the use of a common set of b-weights in all K subgroups increases significantly the pooled residual sum of squares for predicting the dependent variable, as compared to the pooled residual sum of squares obtained from using the b-weights determined uniquely within each subgroup.

The overview above applies when no a priori predictions are made regarding the pattern of differences in the relationships (b-weights). If a pattern of differences is predicted, such as in Table 1, then it is possible to employ "planned comparisons" to conduct tests of parallelism. (Planned comparisons

have the same advantages here as they do in ANOVA.) Planned comparison tests of parallelism are not presented in the references cited above. However, a straightforward extrapolation from the hypothesis test matrix C presented in Timm (1975, p.335) for the overall test of parallelism provided the basis for the planned comparison tests used in this study. That is, following the logic of planned comparisons (cf. Cohen & Cohen, 1975), the hypothesis test matrix C was redesigned to provide a basis for conducting planned comparison tests for the hypothesized relationships presented in Table 1.

To illustrate, the planned comparison for the regression of psychological influence on control (column 2, Table 1) took the form (1 - 3 1 1), which connotes that the control-psychological influence b -weight for the H0-II subgroup should be less than the average of the three control-psychological influence b -weights for the remaining three subgroups. The C matrix took the following form:

$$\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & -3 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

Inspection of the C matrix above suggests that two sets of "common" weights are estimated, one set for the H0-II subgroup (one weight given only one independent variable) and another set for the remaining three subgroups (the same weight for each subgroup). The increase in pooled residual sum of squares for predicting psychological influence from control based on these common weights, as compared to the unique b -weights computed separately in each subgroup, was ascertained by the equation $(C' B)' \left[C' (X' X)^{-1} C' \right]^{-1} (C' B)$ (Timm, 1975, p.336 -- note however the typographical errors in several of Timm's equations). In the present illustration, B is a 4 x 1 column vector of the unique b -weights based on the four separate regressions of psychological influence on control, and $X' X$ is a 4 x 4 diagonal matrix with the four

sums of squares for control in the diagonal (i.e., one per subgroup).

After division by degrees of freedom, the mean square (MS) provided by the equation above was divided by the MS for the pooled residual resulting from the use of unique b-weights. Division of the former MS by the latter MS provided an F statistic. The degrees of freedom were 1 for numerator, which is referred to as the residual due to "common weights", and $N-2K$ for the denominator, which is referred to as the residual due to "unique weights." In this study, K is always equal to 4, and N is always equal to 362. Finally, the equation for the denominator is presented in the cited references.

All tests of parallelism followed the format described above. In fact, the C matrix presented above was employed for all tests, with the exception of the regression of psychological influence on influence opportunities. For this test, the diagonal in C took the form (1-1 1-1) to correspond to the hypotheses presented in column 1 of Table 1.

Results

Results are presented for (a) comparisons among subgroup means and correlations among the variables in the total sample, (b) tests of the selective attention hypothesis, and (c) tests of the consistency hypothesis.

Subgroup Means and Total Sample Correlations

Comparisons of subgroup means on all variables are shown in Table 2. As would be expected, the two moderator variables differentiated among the subgroups. The eta-squares for the remaining variables were low, although all were significant. The low eta-squares reflect the generally low correlations between the moderators and the remaining variables, which are presented in Table 3. An exception was the correlation between the person-type composite

score and anxiety (-.26), which suggested a small but significant tendency for Types II's to be more anxious than Type I's. The correlations in Table 3 also indicated that (a) the moderators were uncorrelated; (b) the supervisor behaviors were moderately, and inversely, related; (c) the supervisor behaviors had low but significant correlations with subordinates' psychological influence and moderate to high correlations with subordinates' performance; the latter set of correlations likely reflected prior findings that supervisors employ their perceptions of a subordinate's performance to decide on a supervisory style for that subordinate (cf. Barrow, 1976; Evans, 1973; Greene, 1975; Herold, 1977; James, Irons, & Hater, Note 1); (d) psychological influence was correlated significantly with all the performance/affect variables; and (e) the two affective variables were moderately correlated, and both of these variables had low correlations with performance.

Insert Tables 2 and 3 about here

Selective Attention

Comparison of the predicted relationships for selective attention presented in Table 1 (columns 1 and 2) with the b-weights and zero-order correlation coefficients presented in section A of Table 4 demonstrates strong support for the predictions. That is, based on the premise that a significant b-weight indicates selective attention, subordinates in the HO-I and LO-I subgroups appeared to be selectively attentive to both influence opportunities and control, subordinates in subgroup LO-II appeared to be attentive to control but not influence opportunities, and subordinates in the HO-II subgroup did not appear to be attentive to either influence opportunities or control.

Insert Table 4 about here

Results of the planned comparison tests for parallelism are presented in section B of Table 4. The planned comparison test for the regression of psychological influence on influence opportunities indicated significant differences in relationships, where the differences corresponded to predictions presented in Table 1. The results for the regression of psychological influence on control were in the expected direction, although equivocal, inasmuch as the significance test achieved a probability value of .09. Review of the b -weights presented in Table 4, section A suggests that the primary differences in relationships occurred between a nonsignificant relationship in the HO-II subgroup and significant, negative relationships in the LO-I and LO-II subgroups. The significant but low negative relationship in the HO-I subgroup is barely different from the relationship in the HO-II subgroup, and it would appear that Type I subordinates in high overload conditions were not highly sensitive to supervisors' use of control.

In sum, the results presented in Table 4 provided moderate to strong support for the relationships predicted by the selective attention hypotheses.

Consistency Hypothesis

As summarized in Table 1, the general consistency hypothesis led to the prediction that not only would Type II's in high overload conditions be non-attentive to influence opportunities, but also that perceptions of psychological influence would be unrelated to performance, satisfaction with the Navy, and anxiety. Results presented above for selective attention upheld the former prediction, and results presented in row 2, section A, Table 5 provided support for the latter prediction (i.e., all psychological influence-performance/affect relationships were nonsignificant in the HO-II subgroup). The consistency hypothesis received additional support inasmuch as (a) subordinates in the HO-I, LO-I, and LO-II subgroups were shown to be attentive to at

least one of the supervisor behaviors, and (b) the psychological influence-performance/affect relationships presented in section A of Table 5 followed exactly the predictions presented in Table 1. Moreover, the planned comparison tests for parallelism, which were based on the predicted differences in relationships presented in Table 1, were significant for the separate regressions of each of the dependent variables on psychological influence (see Section B, Table 5).

Insert Table 5 about here

Discussion

As a whole, the results supported the consistency hypothesis. Type I subordinates, who were described as having comparatively higher levels of achievement motivation, self-esteem, and needs for certainty, and comparatively lower levels of impulsiveness, were shown to be selectively attentive to their supervisors' use of influence opportunities and control, as reflected by significant supervisor behavior-subordinate psychological influence relationships. (The control-psychological influence relationship was not strong, however, for Type I's in the high overload condition). It was also shown that psychological influence perceptions were related significantly to performance, satisfaction with the Navy, and anxiety for the Type I subordinates. These results suggest that the salience of psychological influence to Type I's permeated the cognitive processing system, beginning in the early stages by selective attention to environmental cues reflecting influence opportunities and control, and followed by the use of the perceptions in cognitive formulations of behavioral decisions related to performance and affective reactions related to anxiety and satisfaction

with the Navy.

It is important to note that the flow of cognitive processing may not be unidirectional. For example, desires to reduce anxiety, to increase satisfaction, or to obtain additional information regarding contingencies for successful performance might, in part, underlie the saliency of psychological influence and therefore selective attention to influence opportunities and control (cf. Bandura, 1978; James, Hater, Gent, & Bruni, 1978; Salancik & Pfeffer, 1978).

Overload conditions did not moderate the predictions for Type I's because these subordinates were regarded as desirous of influence in both high and low environmental press situations. On the other hand, overload was regarded as a key moderator for Type II subordinates, who were characterized by comparatively low levels of achievement motivation, self-esteem, and needs for certainty, and comparatively high levels of impulsiveness. In particular, Type II's in high overload conditions were expected to manifest high fear of failure and to withdraw psychologically from high environmental press situations in order to protect self-esteem. The empirical predictions based on psychological withdrawal were lack of relationships (cognitive contingencies) both between psychological influence and supervisors' use of influence opportunities and control, and between psychological influence and performance/affect. Results provided strong support for these predictions; not only were all of the above relationships nonsignificant, but also the relationships for the HO-II subgroup were shown to be significantly lower than those in the remaining three subgroups, based on planned comparison tests of parallelism.

With respect to Type II subordinates in low overload conditions, predictions based primarily on a self-enhancement view of self-esteem (cf. Bandura, 1977; Jones, 1973) were supported. These subordinates appeared

not only to be attentive to supervisors' use of control (but not influence opportunities -- cf. Shrauger & Schoeneman, 1979), but also it was indicated that psychological influence was an important predictor of performance, satisfaction with the Navy, and anxiety. Thus, in low potential of failure conditions, the expectation of cognitive contingencies throughout the cognitive system was upheld for Type II subordinates. This contrasts sharply with the psychological withdrawal predictions supported for Type II's in high fear of failure conditions.

The results have several implications; two of these appeared important with respect to prior research on influence perceptions and are addressed here. First, the support gathered for the consistency hypothesis provides a basis for bridging the gap between (a) studies of influence perception-behavior/affect relationships (cf. House & Mitchell, 1974; Schuler, 1976), which have also supported the need to address person-contextual moderators but which have paid little attention to the means by which influence perceptions were arrived at in the first place, and (b) studies that addressed supervisor behavior-subordinate influence perception relationships (cf. Graen, 1976; James et al., 1979), which either have not paid attention to cognitive processes such as selective attention or have not addressed relationships between influence perceptions and individual outcomes. The consistency hypothesis implies that for a given type of individual in a given type of work environment, it is possible to predict not only how certain types of supervisor behaviors will be perceived by subordinates, but also how the perceptions will be related to performance and affect. Moreover, it is also possible to suggest reasons why no relationships occurred in particular subgroups (i.e., the HO-II condition).

The second implication flows directly from the first. If it is possible to trace a path of relationships (not necessarily causal relationships) from supervisor behaviors through the intervening subordinate perceptions to sub-

ordinate performance and affect, then one has a basis for forecasting how changes in supervisor behaviors will be related to changes in subordinates' perceptions, performance, and affect. For example, the consistency hypothesis might be employed to predict that increases in supervisors' use of influence opportunities and decreases in the use of control will be related to increases in perceived psychological influence, performance, and satisfaction for Type I's in high or low overload conditions. By contrast, similar changes in supervisor behaviors would be predicted to have no relationships with perceptions, performance, or affect for Type II's in high overload conditions. Questions of what might be beneficial for Type II's in high overload conditions could not be answered by this study, although a potentially meaningful option might be to attempt to place all Type II's in low overload conditions in the interest of creating a cognitively contingent set of relationships.

In sum, the consistency hypothesis has implications for both scientific and applied interests. These are only implications, however, and must be considered in relation to the potential shortcomings of a cross-sectional, correlational study. One shortcoming is that no causal implications can be drawn; the changes in supervisor behaviors discussed above are only possibilities and the explanations advanced for the results may in part be spurious (i.e., one or more variables not included in the analyses might be the critical causal variables). Causal modeling in field studies, field experiments, and laboratory investigations are needed in this regard, although exploratory studies such as this investigation are needed to identify salient person and environmental moderators. In this respect, it can be recommended that careful attention be given to environmental presses intrinsic to the sample of interest and to possible interactions between environmental presses and person variables. The reason for this is that envir-

onmental presses are likely to differ in different situational contexts. For example, while overload was important for aircraft maintenance crews, environmental certainty was not of major concern. Environmental certainty was, however, a moderator of supervisor behavior-subordinate influence perception relationships in a prior study of computer analysts and production-line personnel (James et al., 1979).

Another potential shortcoming was experimental dependence between supervisors' descriptions of their behaviors toward each subordinate and their performance ratings of each subordinate. A potential problem here is that the relationships between the performance ratings and subordinates' perceptions of psychological influence might be confounded with selective attention on the part of the subordinates and thus not necessarily indicate the use of the perceptions in decisions concerning behavior. A measure of performance from a source other than the supervisor would have been preferable, although it is fair to note that the psychological influence-affect relationships also conformed to the consistency hypothesis. In addition, the perception-affect relationships could not be attributed to statistical artifacts. Contamination due to method variance was not indicated given the low, nonsignificant psychological influence-affect relationships in the HO-II subgroup (and the low correlations between the person-type composite score and psychological influence and satisfaction). In turn, these low relationships were not due to factors such as restriction of range inasmuch as the standard deviations on all variables were comparable across all subgroups (data are available from the authors). Moreover, with the exception of very extreme restriction, differences among subgroup b -weights are invariant to subgroup differences in standard deviations (cf. Tukey, 1964). Finally, there was no indication that differences among the b -weights were a function of different variable reliabilities among the subgroups.

It is also clear that selective attentiveness to supervisor behaviors is not the only basis for perceptions of psychological influence. Considerable variance remains to be explained in the influence perceptions (as well as in performance and affect), and this explanation will likely require studies of other cognitive/perceptual processes, such as assimilation toward existing beliefs and reciprocal causation between influence perceptions and self-evaluations and attitudes (cf. Bandura, 1978; Endler & Magnusson, 1976; James et al., 1978; Mahoney, 1977; Mischel, 1973; Stotland & Canon, 1972). Of particular importance is the need to identify the antecedents of psychological influence perceptions for Type II subordinates in high overload conditions. Furthermore, the distinctions between Type I and Type II subordinates and high versus low overload conditions reflect trends in the data and not true dichotomies. It is possible to develop more refined person-type and contextual indicators by employing more variables and more subgroups. However, the present study was concerned with the stability of the b -weights in each subgroup, and we did not wish to reduce further the sample sizes employed in this study. There is also the question of cross-validation, which given the subgroup sample sizes, was not attempted in the present study.

Finally, attention is called to the benefits of tests of parallelism that can be employed in future research. These tests can accommodate as many predictors, criteria, and subgroups as a computer will allow, and provide a powerful method for comparing relationships among subgroups.

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Footnotes

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Literature reviewed included studies of overload (Caplin & Jones, 1975; Kahn, Wolfe, Quinn, Snook, & Rosenthal, 1964; Katz & Kahn, 1978; Sales, 1970); achievement motivation (Campbell & Pritchard, 1976; Atkinson, 1964; Kuhl, 1978; McClelland, 1951; Revelle & Michaels, 1976); self-esteem, with emphasis placed on self-enhancement (Bandura, 1977, 1978; Dipboye, 1977; Jones, 1973; Schruager, 1975); need for certainty (cf. James et al., 1979); impulsiveness (Barratt, 1959, 1965; Eysenck & Eysenck, 1977); and influence (see references in text).

Table 1

Predicted Relationships Between Subordinates' Psychological Influence Perceptions and Supervisors' Behaviors and Subordinates' Performance, Satisfaction, and Anxiety

Moderator Conditions	Predicted Relationships with Subordinates' Influence Perceptions			
	Supervisors' Use of Influence Opportunities	Supervisors' Use of Control	Subordinates' Performance and Satisfaction	Subordinates' Anxiety
High Overload-Type I Subordinates	Positive	Negative	Positive	Negative
High Overload-Type II Subordinates	<u>ns</u>	<u>ns</u>	<u>ns</u>	<u>ns</u>
Low Overload-Type I Subordinates	Positive	Negative	Positive	Negative
Low Overload-Type II Subordinates	<u>ns</u>	Negative	Positive	Negative

Note. Positive and negative connote both direction and significance of relationship; ns indicates the relationship is predicted to be nonsignificant.

Table 2

Means and Subgroup Comparisons

Variables	<u>Subgroups</u>				Eta ²
	HO-I	HO-II	LO-I	LO-II	
<u>Moderators</u>					
1. Overload ^a	3.62	3.64	2.43	2.37	.71**
2. Person Type ^b	2.08	-2.25	2.36	-2.16	.61**
<u>Supervisor Behaviors</u>					
3. Influence Opportunity	3.73	3.46	3.73	3.65	.02*
4. Control	.42	.72	- .83	- .52	.03**
<u>Subordinate Perceptions</u>					
5. Psychological Influence	3.17	2.89	3.40	3.16	.04**
<u>Subordinate Performance/Affect</u>					
6. Performance	2.37	2.18	2.35	2.31	.02*
7. Satisfaction w/Navy	2.66	2.40	2.79	2.67	.03**
8. Anxiety	2.38	2.80	2.21	2.55	.07**

Note. Subgroup designations are: high overload - Type I (HO-I, $n = 98$), high overload - Type II (HO-II, $n = 94$), low overload - Type I (LO-I, $n = 87$), and low overload - Type II (LO-II, $n = 83$).

^a Overload scores for each subgroup were assigned to all subordinates in that subgroup.

^b Mean composite score on person variables that provided Type I versus Type II person types.

* $p < .05$

** $p < .01$

Table 3

Total Sample Correlations Among All Variables

Variable	1	2	3	4	5	6	7	8
1	-							
2	-.02	-						
3	-.05	.10	-					
4	.15	-.02	-.32	-				
5	-.12	.14	.23	-.28				
6	-.13	.07	.41	-.64	.25	-		
7	-.12	.12	.18	-.06	.32	.12	-	
8	.14	-.26	-.18	.11	-.38	-.19	-.40	-

Note. $n=362$, $p < .05 = \pm .10$ $p < .01 = \pm .14$.

Table 4

Unstandardized Regression Weights for Separate Regressions of Subordinates' Psychological Influence on Supervisors' Use of Influence Opportunities and Control, and Results of Planned Comparison Tests of Parallelism

A. Unstandardized Regression Weights for Separate Regressions of Psychological Influence on the Supervisor Behaviors				
Supervisor Behavior	Subgroup			
	HO-I	HO-II	LO-I	LO-II
Influence Opportunities	.45**(.39) ^a	-.02(-.02)	.34** (.32)	.09 (.08)
Control	-.25*(-.22)	-.19(-.17)	-.56**(-.42)	-.47**(-.33)

B. Results of Planned Comparison Tests

1. HO-I and LO-I versus HO-II and LO-II Based on Influence Opportunities

Source-Residual	df	MS	F	P
Planned Comparison	1	6.64	9.54	<.01
Unique Weights	354	.70		

2. HO-I, LO-I, and LO-II versus HO-II Based on Control

Source-Residual	df	MS	F	P
Planned Comparison	1	1.96	2.85	<.09
Unique Weights	354	.69		

^a Zero-order correlation coefficients.

*
p < .05

**
p < .01

Table 5

Unstandardized Regression Weights for Separate Regressions of Subordinate Performance, Satisfaction, and Anxiety on Psychological Influence, and Results of Planned Comparison Tests of Parallelism

A. Unique b-weights						
Subgroup	Criterion					
	Performance		Satisfaction		Anxiety	
H0-I	.95**	(.29) ^a	.39**	(.42)	-.53**	(-.56)
H0-II	.13	(.04)	.07	(.07)	-.13	(-.12)
I0-I	1.30**	(.38)	.29**	(.29)	-.32**	(-.37)
I0-II	.73*	(.24)	.29**	(.32)	-.26**	(-.31)

B. Results of Planned Comparison Tests Based on H0-II Subgroup versus All Other Subgroups

Test Results	Criterion		
	Performance	Satisfaction	Anxiety
<u>Degrees of Freedom</u>			
Common Weight	1	1	1
Unique Weights	354	354	354
<u>Mean Square-Residual</u>			
Common Weight	34.36	3.10	2.67
Unique Weights	7.98	.59	.58
<u>F</u>	4.31*	5.25*	4.64*

^a Zero-order correlation coefficient.

* $p < .05$

** $p < .01$

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